

# Reliance on emotion promotes belief in fake news

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ZOOM LINK:

<https://yale.zoom.us/j/93470106253>

## Motivation

- Prior work on the **psychology of misinformation** has focused primarily on the extent to which reason & deliberation hinder versus help accuracy judgments (1)
- Specific role of reliance on emotion remains unclear
- Question: what is the **role of emotion** in **susceptibility** to believing **false news**?

## Methods (Study 1)

- Participants recruited on Amazon Mechanical Turk ( $N=409$ )
- First assessed extent to which participants were experiencing specific emotions (PANAS; 2)
- Then participants **assessed accuracy** of a series of **headlines** – half true, half false



FBI Agent Suspected in Hillary Email Leaks Found Dead in Apparent Murder-Suicide  
Walkerville, MD – An FBI agent believed to be responsible for the latest email leaks “pertinent to the investigation” into Hillary Clinton’s private email server while she was...  
ENABON.COM

## Methods (Study 2)

- Across four experiments utilizing largely the same paradigm ( $N=3884$ ), participants randomly assigned to one of three conditions
  - **Emotion** Induction
  - **Reason** Induction
  - **Control**
- After induction prompt, participants again **assessed accuracy** of a series of true and false **headlines**

## Results (Study 1)

**Table 1 Results of linear mixed-effects analyses for each emotion measured by the PANAS scale**

	Enthusiastic	Interested	Determined	Excited	Inspired	Alert	Active
Fake	0.13 <sup>b</sup>	0.04	0.07 <sup>b</sup>	0.15 <sup>c</sup>	0.15 <sup>c</sup>	0.05 <sup>a</sup>	0.10 <sup>c</sup>
Real	0.01	0.03	0.01	0.002	0.001	0.05 <sup>a</sup>	0.01
Discernment	-0.11 <sup>c</sup>	-0.02	-0.06	-0.14 <sup>c</sup>	-0.15 <sup>c</sup>	-0.01	-0.09 <sup>b</sup>

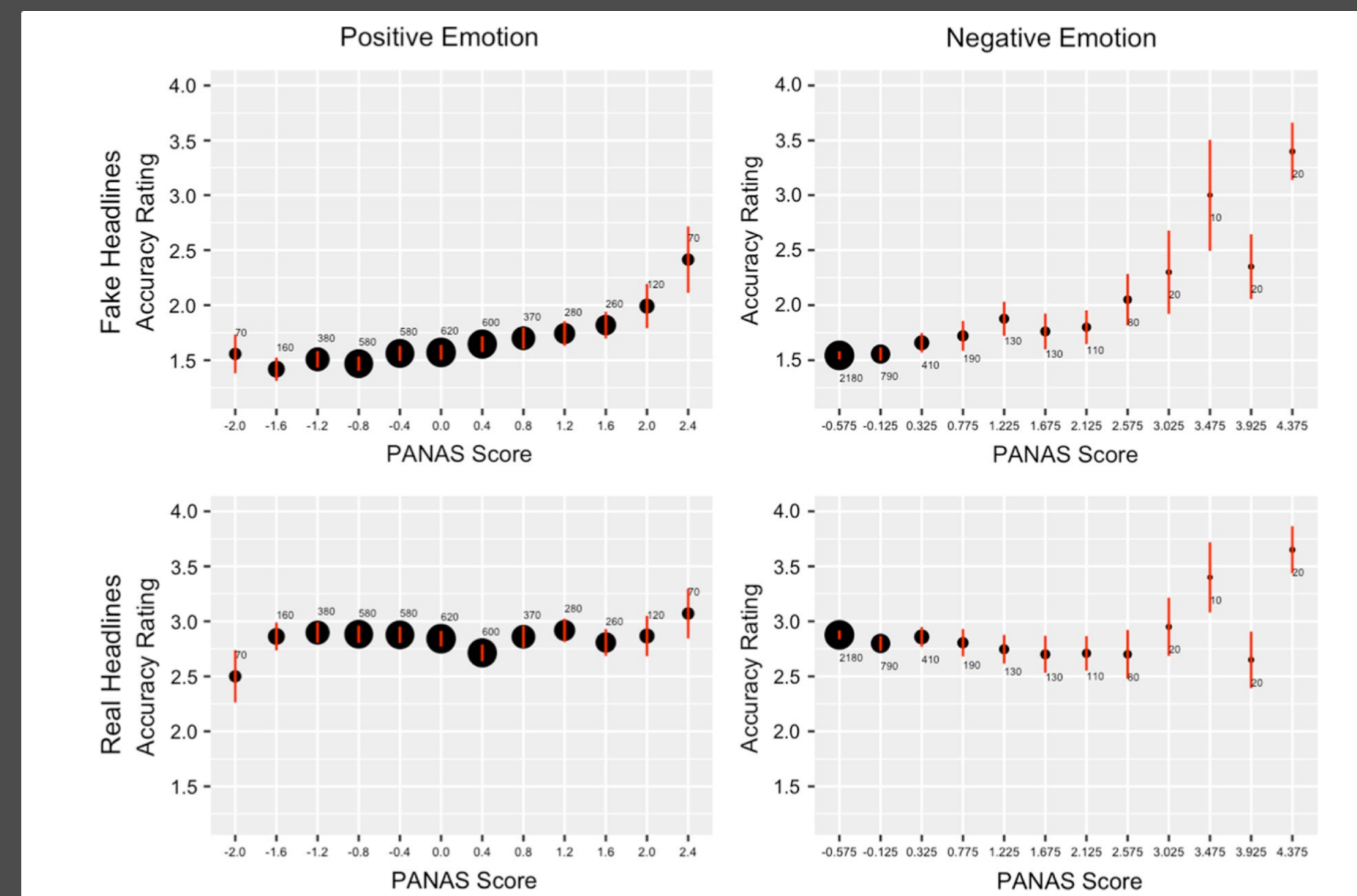
  

	Strong	Proud	Attentive	Scared	Afraid	Upset	Distressed
Fake	0.10 <sup>b</sup>	0.11 <sup>c</sup>	0.01	0.15 <sup>c</sup>	0.13 <sup>c</sup>	0.11 <sup>c</sup>	0.12 <sup>c</sup>
Real	-0.01	-0.03	0.04 <sup>a</sup>	-0.02	-0.02	0.003	0.003
Discernment	-0.10 <sup>b</sup>	-0.14 <sup>c</sup>	0.03	-0.17 <sup>c</sup>	-0.15 <sup>c</sup>	-0.11 <sup>c</sup>	-0.11 <sup>c</sup>

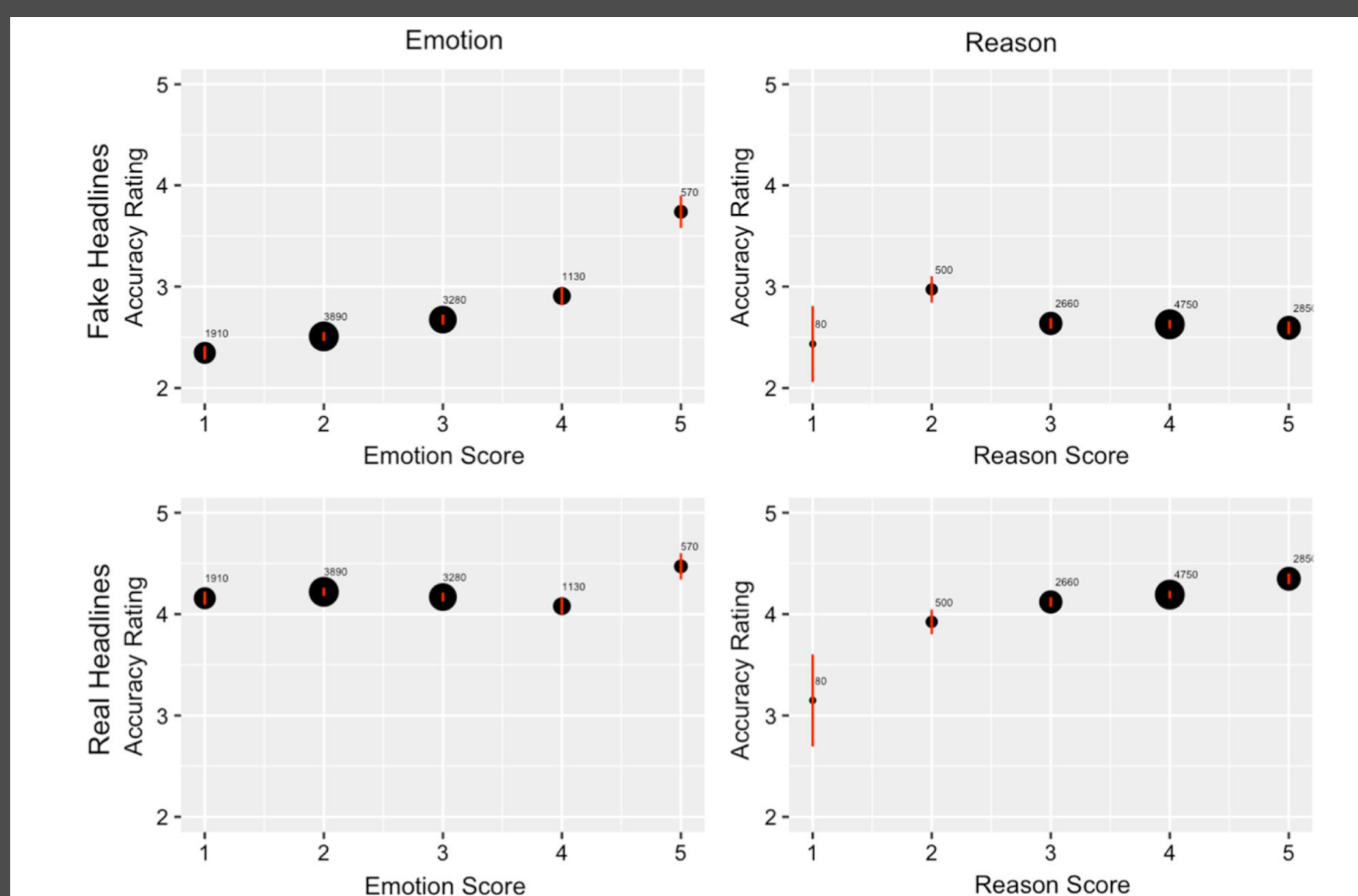
	Jittery	Nervous	Ashamed	Hostile	Guilty	Irritable	Positive	Negative
Fake	0.11 <sup>c</sup>	0.10 <sup>c</sup>	0.12 <sup>c</sup>	0.15 <sup>c</sup>	0.09 <sup>c</sup>	0.11 <sup>c</sup>	0.13 <sup>c</sup>	0.17 <sup>c</sup>
Real	-0.01	-0.01	-0.03	-0.01	-0.02	-0.001	0.01	-0.02
Discernment	-0.13 <sup>c</sup>	-0.11 <sup>b</sup>	-0.15 <sup>c</sup>	-0.16 <sup>c</sup>	-0.11 <sup>b</sup>	-0.11 <sup>b</sup>	-0.12 <sup>c</sup>	-0.18 <sup>c</sup>

Fixed effects in model include PANAS item score, type of news headline, and interaction between PANAS score and type of news headline. Random effects include random intercepts for headline items and participants and by-item random slopes for PANAS scores and by-participant random slopes for type of news headline effects.  
<sup>a</sup>  $p < 0.05$   
<sup>b</sup>  $p < 0.01$   
<sup>c</sup>  $p < 0.001$



**Fig. 2** Plotting reported news headline accuracy as a function of aggregated positive or negative PANAS score shows a positive relationship between both positive and negative emotion and belief in fake news. This relationship is not as evident for belief in real news. Dot size is proportional to the number of observations (i.e., a specific participant viewing a specific headline). Error bars, mean  $\pm$  95% confidence intervals

## Results (Study 2)



**Fig. 3** Plotting reported news headline accuracy as a function of use of emotion or use of reason shows a positive relationship between emotion and belief in fake news, and a positive association between reason and belief in real news. Dot size is proportional to the number of observations (i.e., a specific participant viewing a specific headline). Error bars, mean  $\pm$  95% confidence intervals

## Results (Study 2)

**Table 4 Results of linear mixed-effects analysis of accuracy by condition and type of news article**

	beta	SE	df	t	p
Intercept	2.32	1.69	0.0002	1.37	.999
Control (condition)	-0.12	0.04	140.20	-3.01	.003
Reason (condition)	-0.09	0.04	102.60	-2.23	.028
Real (headline truth)	1.21	0.14	38.00	8.36	<0.001
Control: real	0.10	0.05	75.99	2.01	.048
Reason: real	0.11	0.05	61.77	2.20	.031

Fixed effects in model include experimental condition and type of news headline, plus their interaction. Random effects in model include random intercepts for headline items and participants nested by study, as well as by-item random slopes for condition and by-nested participant random slopes for type of news headline

## Discussion

- Study 1: Across a wide range of specific emotions, **heightened emotionality** was **predictive** of increased **belief in false (but not true) news**
- Study 2: **Inducing reliance on emotion** resulted in **greater belief in false (but not true) news** compared to a control or inducing reliance on reason
- Failed to find evidence that false, politically concordant headlines were believed more in the reason condition than the emotion condition – suggesting people may **fall for false news** because they **rely too heavily on emotion; not because they reason in a motivated way**

## References

1. Pennycook, G., & Rand, D. G. (2019). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*, 188, 39-50.
2. Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.

Current research: Martel, C., Pennycook, G., & Rand, D. G. (2020). Reliance on emotion promotes belief in fake news. *Cognitive Research: Principles and Implications*, 5, 1-20.  
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